Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

[1] (Original) A heat exchanger comprising at least a plurality of tubes through which a first fluid passes, a housing in which the tubes are installed, and sealing members for sealing a second fluid that flows over surfaces of the tubes, wherein

the housing includes an inlet for introducing the second fluid into the housing, as well as a first outlet and second outlets for discharging the second fluid out of the housing,

the tubes are arranged in parallel with one another in the housing,

the sealing members include at least a first sealing member positioned on one of end sides of the tubes, a second sealing member positioned on the other end side of the tubes, and a third sealing member positioned between the first and second sealing members,

the third sealing member is provided so that a gap is provided between the first sealing member and the third sealing member while another gap is provided between the second sealing member and the third sealing member, and that a flow path is formed therein for guiding the second fluid introduced through the inlet toward the first outlet, and

the second outlets are provided in the housing so as to be connected to the gaps, respectively.

[2] (Original) The heat exchanger according to claim 1, wherein

the flow path for the second fluid is formed in a columnar shape,

the inlet and the first outlet are formed in a round shape, and

mouths of the flow path for the second fluid are matched with the inlet and the first outlet, respectively.

[3] (Currently amended) The heat exchanger according to claim 1 ~~or 2~~, wherein

the tubes are arranged so that in a cross-sectional plane perpendicular to a direction of central axes of the tubes, a figure bounded by lines meeting at cross-sectional centers of three neighboring tubes is an equilateral triangle.

[4] (Currently amended) The heat exchanger according to ~~any one of claims 1 to 3~~ claim 1, wherein

the second fluid passing through the flow path is blood, and

the heat exchanger is adapted to form a part of a heart-lung machine.

[5] (Original) A heat exchanger manufacturing method for manufacturing a heat exchanger that includes a plurality of tubes through which a first fluid passes and a housing in a tubular shape, wherein an inlet for introducing the second fluid into the housing and an outlet for discharging the second fluid are provided in sidewalls of the housing, the method comprising at least the steps of:

(a) arranging the tubes in parallel with one another at intervals in a manner such that central axes of the tubes are positioned on the same plane;

(b) forming a tube group by fixing and integrating the tubes in the arrayed state with use of band-like fixing members that are extended in a direction perpendicular to the central axes of the tubes so as to encircle all the tubes, the fixing members being at least two arranged at intervals along a direction of the central axes;

(c) forming a heat exchange module by preparing a plurality of the tube groups and stacking the same, wherein the fixing members of each tube group are brought into close contact, in the direction of the central axes, with the fixing members of another tube groups immediately above and below the foregoing group;

(d) installing the heat exchange module in the housing in a manner such that the direction of the central axes is directed in a longitudinal axis direction of the housing, wherein exposed portions of the fixing members in each tube group on surfaces of the heat exchange module are brought into close contact with or bonded with inner surfaces of the housing; and

(e) filling a resin material in a manner such that a flow path for guiding the second fluid introduced through the inlet toward the outlet is formed in a space positioned

between the two fixing members of each tube group in the housing, or in a manner such that the resin material is filled in interstices around the tubes between openings of the housing and the fixing members of the tube groups.

[6] (Original) The heat exchanger manufacturing method according to claim 5, wherein

in the step (b), the fixing members of each tube group are four in number, which are arranged at intervals along the direction of the central axes, two of the four fixing members being inner fixing members and the other two being outer fixing members disposed relatively outward with respect to the two inner fixing members, and two inner fixing members are positioned so that the inlet and the outlet are positioned between the two inner fixing members, and

in the step (e), the resin material is filled into a space between the two inner fixing members of each tube group in the housing in a manner such that a flow path for guiding the second fluid introduced through the inlet toward the outlet is formed in the space, and further, the resin material is filled in interstices around the tubes between one of the openings of the housing on one side and the outer fixing member of each tube group on the same side, as well as interstices around the tubes between the other opening of the housing on the other side and the outer fixing member of each tube group on the same side.

[7] (Original) The heat exchanger manufacturing method according to claim 6, wherein

the inlet and the outlet are formed, each in a round shape, at positions such that they are opposed to each other, and

in the step (e), the filling of the resin material into the space between the two inner fixing members of each tube group in the housing is carried out by rotating the housing around an axis extending from the center of the inlet to the center of the outlet.

[8] (Currently amended) The heat exchanger manufacturing method according to ~~any one of claims 5 to 7~~ claim 5, wherein

in the step (c), the stacking of the plurality of tube groups is carried out in a manner such that in a cross-sectional plane perpendicular to the direction of the central

axes of the tubes, a figure bounded by lines meeting at the cross-sectional center of each of the tubes in each tube group and the cross-sectional centers of two tubes most adjacent to the foregoing tube in another tube group immediately above or below the foregoing tube group is an equilateral triangle.

[9] (Currently amended) The heat exchanger manufacturing method according to ~~any one of claims 5 to 8~~ claim 5, wherein

the steps (a) and (b) are carried out by using an upper die and a lower die, in each of which a plurality of first grooves where the tubes are to be disposed and a second groove orthogonally crossing the first grooves are formed,

in the step (a), the arrangement of the tubes is carried out by disposing the tubes in the first grooves in either one of the upper and lower dies, and

in the step (b), the integration with use of the fixing members is carried out by joining the upper and lower dies and injecting a resin material into the space formed by the second grooves in the upper and lower dies so that the fixing members are formed by injection molding.

[10] (Original) The heat exchanger manufacturing method according to claim 9, wherein

the resin material used in the step (b) for forming the fixing members by injection molding is a polycarbonate resin or a vinyl chloride resin, and

the resin material used in the step (e) is a polyurethane resin or an epoxy resin.

[11] (Currently amended) A heart-lung machine comprising the heat exchanger according to ~~any one of claims 1 to 4~~ claim 1.

[12] (New) The heat exchanger according to claim 2, wherein

the tubes are arranged so that in a cross-sectional plane perpendicular to a direction of central axes of the tubes, a figure bounded by lines meeting at cross-sectional centers of three neighboring tubes is an equilateral triangle.